SPECIAL RED TUBE 5691

5691
HIGH-MU TWIN TRIODE

Intended for critical industrial applications where 10,000-hour life, extreme uniformity, rigid construction, and exceptional stability are paramount. Within its ratings, the 5691 may be used to replace its receiving-tube counterpart, type 6SL7-GT, where heater transformer will carry increased current.

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:
- Voltage . . . . 6.3 ± 5%* . . . ac or dc volts
- Current . . . . 0.6 . . . . amp

Direct Interelectrode Capacitances:°

	Min.	Av.	Max.	
Triode No.1:				
Grid to Plate	3.1	3.6	4.1	μμf
Grid to Cathode	1.9	2.4	2.9	μμf
Plate to Cathode	1.8	2.3	2.8	μμf
Triode No.2:				
Grid to Plate	3.1	3.6	4.1	μμf
Grid to Cathode	2.2	2.7	3.2	μμf
Plate to Cathode	2.1	2.6	3.1	μμf
Plate of Triode No.1 to Plate of Triode No.2	0.27	0.32	0.37	μμf

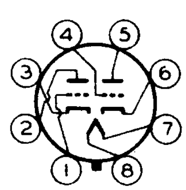
* May deviate ±10% from rated value provided such deviation occurs for less than 2% of the operating time.

° With no external shield.

Mechanical:

Mounting Position . . . . Any
Maximum Overall Length . . . . 2-7/8"
Maximum Seated Length . . . . 2-5/16"
Maximum Diameter . . . . 1-9/32"
Bulb T-9
Base . . . . Short Intermediate-Shell Octal 8-Pin, Non-Hygroscopic
Basing Designation for BOTTOM VIEW 8BD

Pin 1 - Grid of Triode No.2
Pin 2 - Plate of Triode No.2
Pin 3 - Cathode of Triode No.2
Pin 4 - Grid of Triode No.1



Pin 5 - Plate of Triode No.1
Pin 6 - Cathode of Triode No.1
Pin 7 - Heater
Pin 8 - Heater

(continued on next page)

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INDUSTRIAL SERVICE

Includes applications such as dc and audio amplifiers

Values are for each unit

Maximum Ratings, *Absolute Values*:

DC PLATE VOLTAGE	275 max.	volts
DC PLATE-SUPPLY VOLTAGE	330 max.	volts
GRID VOLTAGE:		
Negative bias range	1● min. to 100 max.	volts
Negative peak value	200 max.	volts
DC GRID CURRENT	2 max.	ma
DC CATHODE CURRENT	10 max.	ma
PLATE DISSIPATION	1 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts
AMBIENT TEMPERATURE RANGE	-55 to +90	°C

● For resistance-coupled amplifier applications, the negative bias may be as low as 0.5 volt.

Maximum Circuit Value (for any operating condition):

Grid-Circuit Resistance . . . . 2 max. megohms

Characteristics and Range Values:

Heater Volts, 6.3; Plate Volts, 250; Grid Volts, -2

	Min.	*Av.*	*Max.*	
Heater Current	0.55	0.6	0.65	amp
Heater-Cathode Current with heater-cathode voltage of ± 100 volts	-	-	5	μamp
Plate Current	1.7	2.3	2.9	ma
Difference in Plate Current between triode units	-	-	0.9	ma
Plate Current for grid voltage of -5.5 volts	-	-	15	μamp
Reverse Grid Current	-	-	0.2	μamp
Amplification Factor	60	70	80	
Plate Resistance	-	44000	-	ohms
Transconductance	1300	1600	1900	μmhos

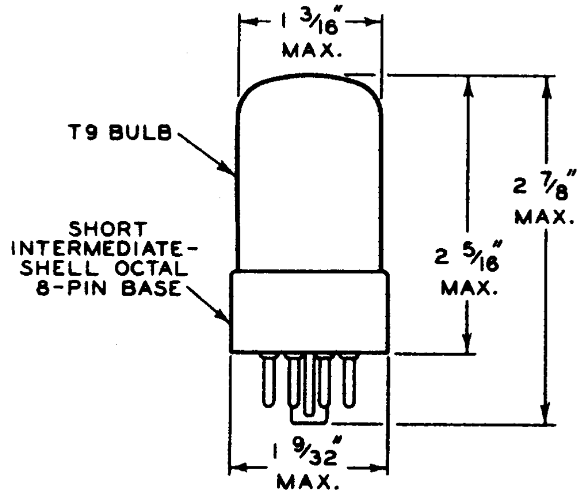
Typical Operation as Resistance-Coupled Amplifier (Each Unit)

See RESISTANCE-COUPLED AMPLIFIER CHART No. 7 at front of Receiving Tube Section.

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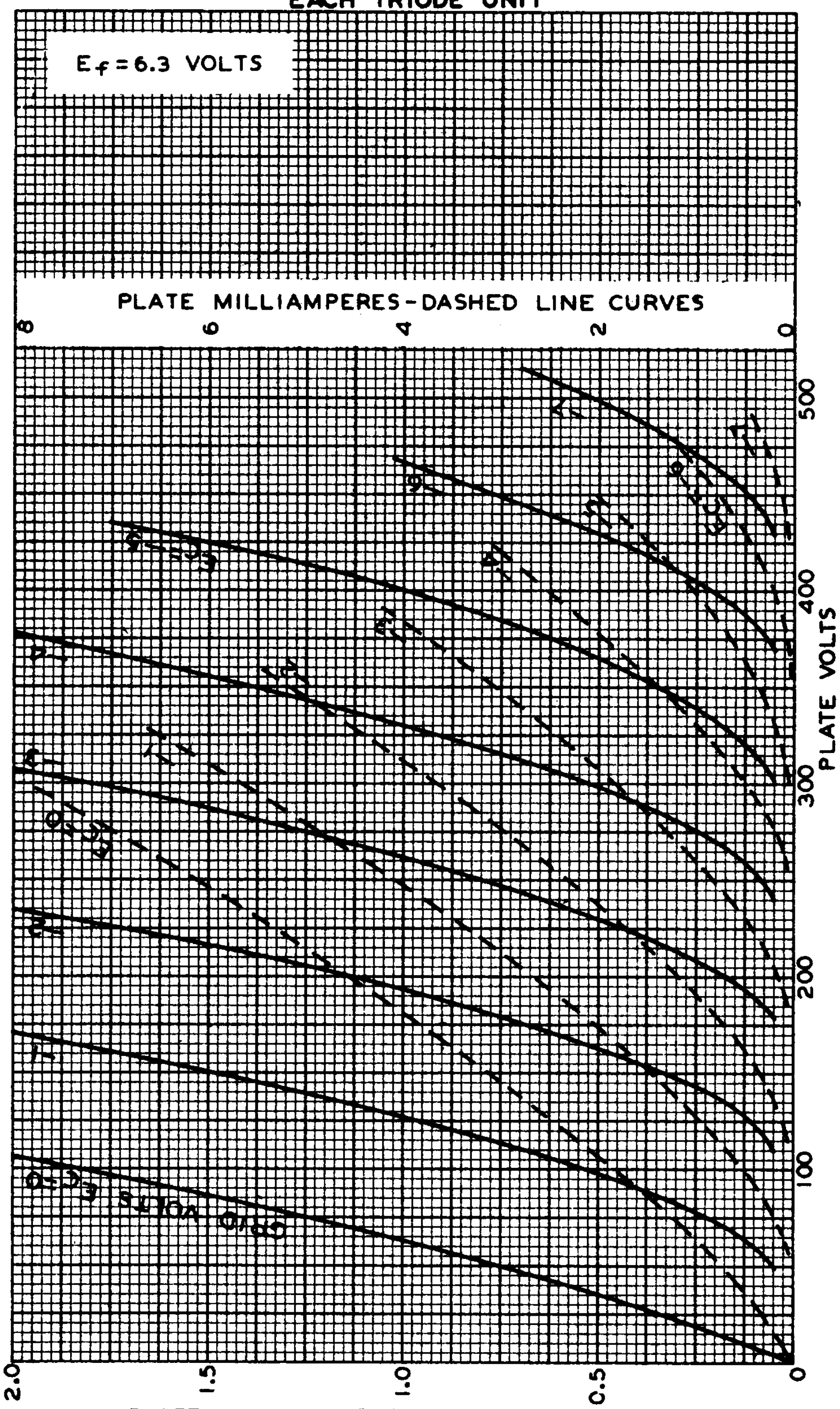
MAR. 15, 1948

OUTLINE

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AVERAGE PLATE CHARACTERISTICS
EACH TRIODE UNIT



JUNE 16, 1941 TUBE DEPARTMENT 92C-6298

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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AVERAGE CHARACTERISTICS
EACH TRIODE UNIT

